APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,685	06/29/2001	Noboru Asauchi	210165US2	9428

22850	7590	02/21/2006

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EXAMINER
POON, KING Y

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 December 2005</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-76* is/are pending in the application.

    4a) Of the above claim(s) *12-18,29-37,44-49 and 70-75* is/are withdrawn from consideration.

5) ☒ Claim(s) *19-28,38-43,50-63,65 and 68* is/are allowed.

6) ☒ Claim(s) *1,2,64,66,67,69 and 76* is/are rejected.

7) ☒ Claim(s) *3-11* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Applicant's election with traverse of the restriction requirement in the reply filed

on 12/1/2005 is acknowledged. The traversal is on the ground(s) that search and

examination of an entire application can be made without serious burden. This is not

found persuasive because it was shown a serious burden on the examiner by

classifying the different inventions in different class and showing separate status in the

art. The examiner agrees that there may perhaps be some related subject matter;

however, there is a greater amount of searching required in areas which are related.

The requirement is still deemed proper and is therefore made FINAL.

2.   Claims 12-18, 29-37, 44-49, 70-75 have withdrawn from further consideration

pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no

allowable generic or linking claim. Applicant timely traversed the restriction (election)

requirement in the reply filed on 12/1/2005.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4.   Claims 1, 2, 64, 66-67, 69, 76 are rejected under 35 U.S.C. 102(a) as being

anticipated by Saruta et al (EP 1004450 A2).

Regarding claim 1: Saruta et al. teach a printing material container (fig. 15, ink

cartridges 107K & 107F) detachably attached to a printing apparatus (fig 1 & page 10

line 38, ink cartridge is attached to unit 18 part of printer) having a clock signal line (fig

6, CLK line) a data signal line (fig 6, DATA line), and a reset signal line (fig 6 chip select

signal CS line), said printing material container comprising: a reservoir unit that keeps a

printing material therein (fig 5 and page 10, line 18, ink chamber 117K keeps ink); a

clock terminal that receives a clock signal sent via the clock signal line of said printing

apparatus (fig 6, clock terminal receives CLK signal via CLK line of printer main body

100); a data terminal that transmits a data signal to and from the data signal line of said

printing apparatus (fig 6, data terminal transmits DATA signal via DA TA line of printer

main body 100); a reset terminal that receives a reset signal sent via the reset signal

line of said printing apparatus (fig. 6, reset terminal receives CS/reset signal via

CS/reset line of printer main body 100); a storage element (fig. 6 & fig 15, storage

element 80) having a plurality of non-volatile storage areas (fig 9 storage areas 600-

620, 660 and 650) that are sequentially accessed (page 12, paragraph 0080, storage

areas are accessed one after another) and a storage element control unit (fig 6, address

counter 83) that is initialized at a first level of the input reset signal (page 11, lines 18-

19, when reset CS signal is low, address counter 83, i.e. storage element control unit, is

set equal to zero, i.e. is initialized) and carries out a writing/reading operation of data

into and from the storage element according to the data signal synchronously with the

input clock signal when the reset signal is switched over to a second level (page 11,

lines 19-21, when reset CS signal goes high, i.e. is switched over to a second level, the

address counter 83 is enabled, which allows data reading/writing. Page 11, lines 30-31,

data are written synchronously with clock signal).

Regarding claim 2, Saruta et al. teach a printing material container in accordance

with claim 1, wherein data are written into the storage element bit by bit (page 1, lines

28-29, data are written in one-bit outputs).

Regarding claim 64, Saruta et al. teach a method of gaining access to a storage

device attached to a desired printing material container among a plurality of printing

material containers (fig 15, containers 107K and 107F), each printing material container

having a non-volatile storage device (fig 6 & fig 15, storage element 80) that connects

with a clock signal line (fig 6, CLK line), a data signal line (fig 6, DATA line), and a reset

signal line (fig 6 chip select signal CS line), and stores proper identification information

therein (fig 8 & page 12 paragraph 0078, serial number data can be used as an ID),

said method comprising the steps of: outputting a reset signal to the reset signal line

(page 11 paragraph 0070, reset CS signal is output low and high); and transmitting a

data array (fig 12, step 56), and a write/read command to the data signal line

synchronously with a clock signal (page 11 paragraph 0071, R/W signal switches to

high and data are written synchronously with the rise of the clock).

Regarding claim 66, Saruta et al. teach in a printing material container (fig 15,

containers 107K and 107F) having a non-volatile storage device (fig 6, storage element

80), which includes a storage element (fig 6, memory cell 81) sequentially accessed

(page 12, paragraph 0080, storage areas are accessed one after another), a method of

storing identification information in a specific section located between a head position

and a predetermined position of a storage area in the storage element (page 11, lines

33-34, storing of ink remaining identification information by way of ink quantity specific

to device), said method comprising the steps of: resetting a count on an address

counter to an initial value and prohibiting increment of the count synchronously with a

clock signal, in response to detection of a reset signal (page 11, lines 18-19, when reset

CS signal is low, address counter 83, i.e. storage element control unit, is set equal to

zero, i.e. is initialized, and count is prohibited); setting a direction of data transfer with

regard to a data bus to a writing direction and a direction of data transfer with regard to

the storage element to a writing direction, in response to a write command transmitted

to the data bus (page 11, paragraph 0071 writing command is issued to deliver data

from printer main body into storage element); allowing increment of the count on the

address counter synchronously with the clock signal after completion of the settings of

the directions of data transfer (page 11, lines 18-21, address counter is incremented

with the clock signal); and writing the identification information between the head

position and the predetermined position of the storage area in the storage element and

subsequently writing data into the storage area according to the count on the address

counter (page 11 lines 18-21, address counter is incremented with the clock signal to

specify an address. Fig 8, data position 701 stores identification information regarding

remaining ink quantity).

Regarding claim 67, Saruta et al. teach in a printing material container (fig 15,

containers 107K and 107F) having a non-volatile storage device (fig 6, storage element

802, which includes a storage element (fig 6, memory cell 81) sequentially accessed

(page 12, paragraph 0080, storage areas are accessed one after another), a method of

reading data stored in a storage area of the storage element from a head position of the

storage area, said method comprising the steps of: resetting a count on an address

counter to an initial value and prohibiting increment of the count synchronously with a

clock signal, in response to detection of a reset signal (page 11:lines 18-19, when reset

CS signal is low, address counter 83, i.e. storage element control unit, is set equal to

zero, i.e. is initialized, and count is prohibited); setting a direction of data transfer with

regard to a data bus to a reading direction and a direction of data transfer with regard to

the storage element to a reading direction, in response to a read command transmitted

to the data bus (page 12, paragraph 0079, storage area 660 is located near the head

and can be written to or read from, which is inclusive of a command that sets data

transfer direction from the storage element and into the printer); allowing increment of

the count on the address counter synchronously with the clock signal after completion of

the settings of the directions of data transfer (page 11, lines 20-21, address counter

counts up with the clock to select the address in memory to read from); and reading

data stored in the storage area of the storage element from the head position of the

storage area according to the count on the address counter (page 12, lines 19-21,

section 660 is near the head position of the storage area).

Regarding claim 69, Saruta et al. teach a method in accordance with any one of

claims 64, 66, 67 68, said method being applied to a set of at least two printing material

containers (fig 15, multiple containers 107F and 107K), each having said storage device

that stores a different piece of identification information (fig 8, data position 701 stores

identification information regarding remaining ink quantity which is specific to each

container).

Regarding claim 76: Saruta et al. teach a printing material container detachably attached to a printing apparatus, said printing material container comprising: a reservoir unit that keeps a printing material therein (fig 5 & page 10, line 18, ink chamber 117K keeps ink); a storage element (fig 6, storage element 80) configured to be responsive to a reset signal (CS, fig. 6) input and having a storage area of an identification information (fig. 9, section 601 contains identification of ink quantity remaining), and a writable data area, in which data are writable (page 12, paragraph 0079, storage area 660 is located near the head and can be written to, wherein fig 9, section 602 can be written to), after the storage area of the identification information (section 602 comes after 601).

Allowable Subject Matter

5.   Claims 19-28, 38-43, 50-63, 65, 68 are allowed.

6.   Claims 3-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7.   Applicant's arguments filed 8/16/2005 have been fully considered but they are not persuasive.

With respect to applicant's argument that the CS signal of fig. 6 is not a reset

signal because the signal is not supplied to the read/write controller, has been

considered.

In reply: A reset signal used to reset a read/write controller is not part of the

claimed limitations. Page 11:lines 18-19, Saruta, teaches when reset CS signal is low,

address counter 83, i.e. storage element control unit, is set equal to zero, i.e. is

initialized, and count is prohibited.

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.
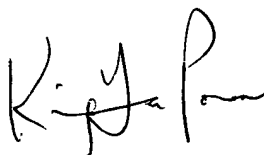
Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to King Y. Poon whose telephone number is 571-272-

7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

February 9, 2006

KING Y. POON
PRIMARY EXAMINER